

CLAIMS

1. A floating caliper type disc brake comprising:
 - a support member fixed to a vehicle body and disposed adjacent to a rotor which rotates together with a wheel;
 - 5 a pair of pads supported by the support member on both sides of the rotor slidably in an axial direction thereof;
 - a caliper supported displaceably in the axial direction of the rotor, the caliper being supported by a plurality of guide holes provided in the support member and a plurality of guide pins respectively fitted in the guide holes;
 - 10 a claw portion provided on one side of a bridge portion of the caliper, the bridge portion straddling the rotor; and a piston provided on another side thereof,
 - wherein the pair of pads are pressed against both side surfaces of the rotor in consequence of the extension of the piston so as to effect braking,
 - 15 pressed-side shim plates are respectively retained by those surfaces of back plates of the pair of pads which are located away from a rotor side,
 - 20 pressing-side shim plates are respectively retained by pressing sides of the claw portion and the piston, and each of the pressed-side shim plates and each of the pressing-side shim plates are slidably abutted against each other.
- 25 2. The floating caliper type disc brake according to claim

1, wherein each of the plurality of guide pins comprises, at its each opposite end portion in the axial direction of the rotor, a first diameter portion having a clearance of a predetermined dimension or more with respect to the guide hole
5 in which the guide pin is fitted, and

at least one of the guide pins comprises, in its intermediate portion in the axial direction of the rotor, a second diameter portion whose diameter is larger than that of the first diameter portion.

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3. The floating caliper type disc brake according to claim 2, wherein, of the plurality of guide pins, the guide pin other than the guide pin having the second diameter portion comprises, in its intermediate portion in the axial direction of the rotor,
15 a third diameter portion whose diameter is larger than that of the first diameter portion.

4. The floating caliper type disc brake according to claim 2 or 3, wherein, of the plurality of guide pins, the guide pin other than the guide pin having the second diameter portion comprises a fourth diameter portion connecting the first diameter portions and extending in the axial direction of the rotor with a clearance of a predetermined dimension or more with respect to an inner peripheral surface of the guide hole.
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5. The floating caliper type disc brake according to any

one of claims 2 to 4, wherein a shape of a generating line
of the second diameter portion or the third diameter portion
having the large diameter is one of a convex circular arc,
a shape in which a rectilinear portion is sandwiched by a pair
5 of convex circular arcs, and a trapezoid.

6. The floating caliper type disc brake according to any
one of claims 2 to 5, wherein the second diameter portion or
the third diameter portion having the large diameter is formed
10 integrally with the guide pin.

7. The floating caliper type disc brake according to any
one of claims 2 to 4, wherein the second diameter portion or
the third diameter portion having the large diameter is formed
15 as a sleeve is fitted over and fixed to the guide pin.

8. The floating caliper type disc brake according to any
one of claims 2 to 4, wherein a ring of an elastic material
is fitted over each of axially opposite sides of the guide
20 pin sandwiching the second diameter portion or the third diameter
portion having the large diameter.

9. A floating caliper type disc brake comprising:
a support member fixed to a vehicle body and disposed
25 adjacent to a rotor which rotates together with a wheel;
a pair of pads supported by the support member on both

sides of the rotor slidably in an axial direction thereof;
a caliper supported displaceably in the axial direction
of the rotor, the caliper being supported by a plurality of
guide holes provided in the support member and a plurality
5 of guide pins respectively fitted in the guide holes;

a claw portion provided on one side of a bridge portion
of the caliper, the bridge portion straddling the rotor; and
a piston provided on another side thereof,

wherein the pair of pads are pressed against both side
10 surfaces of the rotor in consequence of the extension of the
piston so as to effect braking,

pressed-side shim plates are respectively fixed to
or retained by those surfaces of back plates of the pair of
pads which are located away from a rotor side,

15 pressing-side shim plates are respectively fixed to
or retained by pressing sides of the claw portion and the piston,
and

each of the pressed-side shim plates and each of the
pressing-side shim plates are slidably abutted against each
20 other.

10. The floating caliper type disc brake according to claim
9, wherein each of the plurality of guide pins comprises, at
its each opposite end portion in the axial direction of the
25 rotor, a first diameter portion having a clearance of a
predetermined dimension or more with respect to the guide hole

in which the guide pin is fitted, and

at least one of the guide pins comprises, in its intermediate portion in the axial direction of the rotor, a second diameter portion whose diameter is larger than that
5 of the first diameter portion.

11. The floating caliper type disc brake according to claim
10, wherein, of the plurality of guide pins, the guide pin
other than the guide pin having the second diameter portion
comprises, in its intermediate portion in the axial direction
10 of the rotor, a third diameter portion whose diameter is larger
than that of the first diameter portion.

12. The floating caliper type disc brake according to claim
15 10 or 11, wherein, of the plurality of guide pins, the guide
pin other than the guide pin having the second diameter portion
comprises a fourth diameter portion connecting the first diameter
portions and extending in the axial direction of the rotor
with a clearance of a predetermined dimension or more with
20 respect to an inner peripheral surface of the guide hole.

13. The floating caliper type disc brake according to any
one of claims 10 to 12, wherein a shape of a generating line
of the second diameter portion or the third diameter portion
25 having the large diameter is one of a convex circular arc,
a shape in which a rectilinear portion is sandwiched by a pair

of convex circular arcs, and a trapezoid.

14. The floating caliper type disc brake according to any one of claims 10 to 13, wherein the second diameter portion 5 or the third diameter portion having the large diameter is formed integrally with the guide pin.

15. The floating caliper type disc brake according to any one of claims 10 to 13, wherein the second diameter portion 10 or the third diameter portion having the large diameter is formed as a sleeve is fitted over and fixed to the guide pin.

16. The floating caliper type disc brake according to any one of claims 10 to 15, wherein a ring of an elastic material 15 is fitted over each of axially opposite sides of the guide pins sandwiching the second diameter portion or the third diameter portion having the large diameter.

17. The floating caliper type disc brake according to any 20 one of claims 1 to 16, wherein a curved portion having a circular arc-shaped cross section and curved toward a side of the claw portion or the piston is provided at an end of at least one of the pressing-side shim plates so as to retain or fix the pressing-side shim plate, the curved portion being opposed 25 to one surface of the pressed-side shim plate.